	Hits	Search Text	DBs
1	1	wo-9813405-$.did.	JPO; DERWENT
2	1	wo-9903863-$.did.	JPO; DERWENT
3	2	jp-04248826-$.did.	JPO; DERWENT
4	2	jp-63179916-$.did.	JPO; DERWENT
5	2	jp-07224138-$.did.	JPO; DERWENT
6	0	au-97041924-$.did.	JPO; DERWENT
7	0	au-4192497-$.did.	JPO; DERWENT
8	7	(("5814705") or ("4786657") or ("5049591") or ("5139832") or ("5393858") or ("5430121") or ("5911737")).PN.	USPAT
9	1	("5132047").PN.	USPAT
10	2	(("4689356") or ("4722946")).PN.	USPAT
11	1	("2468731").PN.	USPAT
12	1	("3563973").PN.	USPAT
13	1	("5,139,832").PN.	USPAT; US-PGPUB
14	1	("5,049,591").PN.	USPAT; US-PGPUB
15	6	(("4786657") or ("5049591") or ("5139832") or ("5393858") or ("5430121") or ("5911737")).PN.	USPAT; US-PGPUB
16	2	JP-04248826-$.DID.	JPO; DERWENT
17	4	(("4722946") or ("4689356") or ("2468731") or ("3563973")).PN.	USPAT; US-PGPUB

	Hits	Search Text	DBs
18	139849	silicon$1 adj (polymer or oil or elastomer) or polysiloxane or polyorganosiloxane or organopolysiloxane or polydiorganosiloxane or diorganopolysiloxane or poly! adj oxy! adj dimethylsilylene or polyoxydimethylsilylene or PDMS or polydimethylsiloxane or poly! Adj dimethylsiloxane	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
19	1161513	HO! or OH! or hydroxy$1 or carbinol or silanol or diol or glycol or eugenol!	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
20	12948	(silicon$1 adj (polymer or oil or elastomer) or polysiloxane or polyorganosiloxane or organopolysiloxane or polydiorganosiloxane or diorganopolysiloxane or poly! adj oxy! adj dimethylsilylene or polyoxydimethylsilylene or PDMS or polydimethylsiloxane or poly! Adj dimethylsiloxane) near5 (HO! or OH! or hydroxy$1 or carbinol or silanol or diol or glycol or eugenol!)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
21	207	dihydroxypolydiorganosiloxane or dihydroxypolysiloxane or dihydroxy! adj (polydiorganosiloxane or polysiloxane) or dihydroxydimethyl! adj (polydiorganosiloxane or polydiorganosiloxane)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
22	91	silanol adj fluid	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB

	Hits	Search Text	DBs
23	13091	((silicon$1 adj (polymer or oil or elastomer) or polysiloxane or polyorganosiloxane or organopolysiloxane or polydiorganosiloxane or diorganopolysiloxane or poly! adj oxy! adj dimethylsilylene or polyoxydimethylsilylene or PDMS or polydimethylsiloxane or poly! Adj dimethylsiloxane) near5 (HO! or OH! or hydroxy$1 or carbinol or silanol or diol or glycol or eugenol!)) or (dihydroxypolydiorganosiloxane or dihydroxypolysiloxane or dihydroxy! adj (polydiorganosiloxane or polysiloxane) or dihydroxydimethyl! adj (polydiorganosiloxane or polydiorganosiloxane)) or (silanol adj fluid)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
24	24604	phosgene	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
25	30	(((silicon$1 adj (polymer or oil or elastomer) or polysiloxane or polyorganosiloxane or organopolysiloxane or polydiorganosiloxane or diorganopolysiloxane or poly! adj oxy! adj dimethylsilylene or polyoxydimethylsilylene or PDMS or polydimethylsiloxane or poly! Adj dimethylsiloxane) near5 (HO! or OH! or hydroxy$1 or carbinol or silanol or diol or glycol or eugenol!)) or (dihydroxypolydiorganosiloxane or dihydroxypolysiloxane or dihydroxy! adj (polydiorganosiloxane or polysiloxane) or dihydroxydimethyl! adj (polydiorganosiloxane or polydiorganosiloxane)) or (silanol adj fluid)) same phosgene	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
26	381378	polyurethane or urethane or diisocyanate	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB

	Hits	Search Text	DBs
27	17	((((silicon$1 adj (polymer or oil or elastomer) or polysiloxane or polyorganosiloxane or organopolysiloxane or polydiorganosiloxane or diorganopolysiloxane or poly! adj oxy! adj dimethylsilylene or polyoxydimethylsilylene or PDMS or polydimethylsiloxane or poly! Adj dimethylsiloxane) near5 (HO! or OH! or hydroxy$1 or carbinol or silanol or diol or glycol or eugenol!)) or (dihydroxypolydiorganosiloxane or dihydroxypolysiloxane or dihydroxy! adj (polydiorganosiloxane or polysiloxane) or dihydroxydimethyl! adj (polydiorganosiloxane or polydiorganosiloxane)) or (silanol adj fluid)) same phosgene) and (polyurethane or urethane or diisocyanate)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
28	160204	polycarbonate	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
29	317	(((silicon$1 adj (polymer or oil or elastomer) or polysiloxane or polyorganosiloxane or organopolysiloxane or polydiorganosiloxane or diorganopolysiloxane or poly! adj oxy! adj dimethylsilylene or polyoxydimethylsilylene or PDMS or polydimethylsiloxane or poly! Adj dimethylsiloxane) near5 (HO! or OH! or hydroxy$1 or carbinol or silanol or diol or glycol or eugenol!)) or (dihydroxypolydiorganosiloxane or dihydroxypolysiloxane or dihydroxy! adj (polydiorganosiloxane or polysiloxane) or dihydroxydimethyl! adj (polydiorganosiloxane or polydiorganosiloxane)) or (silanol adj fluid)) same polycarbonate	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB

	Hits	Search Text	DBs
30	216	(polyurethane or urethane or diisocyanate) and ((((silicon$1 adj (polymer or oil or elastomer) or polysiloxane or polyorganosiloxane or organopolysiloxane or polydiorganosiloxane or diorganopolysiloxane or poly! adj oxy! adj dimethylsilylene or polyoxydimethylsilylene or PDMS or polydimethylsiloxane or poly! Adj dimethylsiloxane) near5 (HO! or OH! or hydroxy$1 or carbinol or silanol or diol or glycol or eugenol!)) or (dihydroxypolydiorganosiloxane or dihydroxypolysiloxane or dihydroxy! adj (polydiorganosiloxane or polysiloxane) or dihydroxydimethyl! adj (polydiorganosiloxane or polydiorganosiloxane)) or (silanol adj fluid)) same polycarbonate)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
31	26151	shape near2 memory	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
32	488155	polyurethane or urethane or urea	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
33	458	(shape near2 memory) with (polyurethane or urethane or urea)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
34	1157	(525/474).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
35	960	(525/477).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
36	194	(525/464).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
37	527	(525/452).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
38	143	(525/937).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB

	Hits	Search Text	DBs
39	661	(528/68).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
40	1487	(528/76).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
41	1341	(528/85).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB

95-325584/42 A25 F01 SANN 94.02.09
SANYO CHEM IND LTD *JP 07224138-A
94.02.09 94JP-037902 *(95.08.22)* C08G 18/61, 18/65

Mfr. of polyurethane resin used in elastic fibres for socks, etc - comprises reacting high mol. wt. active hydrogen cpd. having two active hydrogen gps., organic di:isocyanate and chain extender, where active hydrogen cpd. silicon:di:amine cpds.

C95-144565

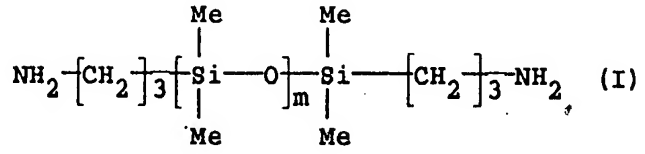
The mfr. of a polyurethane resin comprises reacting:

(i) a high mol. wt. active hydrogen cpd. having two active hydrogen gps.;

(ii) an organic diisocyanate; and

(iii) a chain extender.

The active hydrogen cpd. contains 1-30 wt.% of silicon diamines of formula (I);



(I)

A(5-G1E, 5-J4, 10-D, 12-C3, 12-F1, 12-S5D) F(1-D7, 1-D10, 2-G4A, 4-C1, 4-C2, 4-C3)

m = 5-100.

USE

Used in elastic fibres for socks, bathing suits or foundation wear.

ADVANTAGE

Product has good tensile properties, friction with metals, running smoothness and heat-setting ability. It can be wound without requiring a large amt. of finishing oils, thus reducing the level of contamination.

EXAMPLE

1600 pts. of polycaprolactone diol (ave. mol. wt. = 2000), 336 pts. of silicon diamine (I, where m = 38) and 180 pts. of 1,4-butane diol were mixed in a kneader. 750 pts. of 4,4'-diphenyl methane diisocyanate (MDI) was added and reacted at 150 °C for 1 hr.. The product was extruded into a pellet. (Intrinsic viscosity = 0.85). It was spun at 500 m/min into a 40 denier monofilament using a spinning oil of 5% silicon-modified polydimethylsiloxane. 4% of this oil was applied to the filament.

JP 07224138-A+

The fibre had: a tension = 3.2 g; a coefficient = 0.390; a tensile strength = 1.5 g/d, an elongation = 380%; and an elastic recovery = 80%.

In a comparative example, 3000 pts. of silicon diamine X-22 161B (RTM) (av. mol wt. = 3000) (I, where m = 38) and 270 pts. of 1,4-butanediol were mixed in a kneader. 1000 pts. of MDI was added and reacted at 150 °C for 1 hr. The prod. was extruded into a pellet (Intrinsic viscosity = 0.90).

The fibre had: a tension = 3.0 g; a coefficient = 0.320; a tensile strength = 1.1 g/d; an elongation = 330%; and an elastic recovery = 68%. (JS)

(6pp171DwgNo.0/0)

88-246748/35 A25 (A17 A26 A94 A96) DNIN 22.01.87
*J6 3179-916-A

DAINIPPON INK CHEM KK

22.01.87-JP-011420 *(23.07.88)* C08g-18/61

Thermoplastic polyurethane resin with improved water repellency - obtd. from diol of polysiloxane diol and polyoxy tetramethylene glycol

C88-110496

In thermoplastic polyurethane (PU) resin having

[a] soft segments of polyols and

[b] hard segments of aliphatic diisocyanates and aliphatic diamines,

the diols comprise

[1] 3-50 wt. % [based on the PU resin] of polysiloxane diol with molecular wt. of 600-3000, and

[2] more than 0.6 times [based on the diol [1]] of polyoxytetramethylene glycol (POTMG) with mol. wt. of 800-2,200.

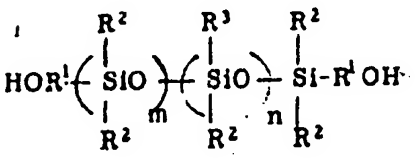
ADVANTAGE/USE

Resins with improved moisture transmittance and water repellency are obtd. They are suitable as materials for clothes, industrial use or medical use.

RAW MATERIALS

The polysiloxane diol has formula:

A(5-G, 5-G3, 6-AA, 9-A)



R^1 = 1-6 C alkyl;
R^2 = methyl or phenyl;
R^3 = phenyl or 1-15 C alkyl;
m and n = integer.
Other diols are opt. combined.

EXAMPLE

45 pts. wt. of polysiloxane diol with mol. wt. of 2,000, 45 pts. wt. of POTMG with mol. wt. of 2,000, 60 pts. wt. of poly(1,4-butane-diol adipate) with mol. wt. of 2,000 and 50 pts. wt. of toluene are charged in a reactor, 50 pts. wt. of isophorone diisocyanate and 0.05 pt. wt. of dibutyltin dilaurate are added and agitated at 80°C for 4 hrs. 80 pts. wt. of toluene is added and cooled. A prepolymer soln. with NCO equivalent is obtd.

J63179916-A+

A

MARKED
27-Oct-97

J63179916-A

270 pts wt. of the soln. is added to a mixt. of 25 pts. wt. of dicyclohexylmethane-4,4-diamine, 190 pts. wt. of toluene, 300 pts. wt. of isopropanol, 140 pts. wt. of methyl cellosove and 0.15 pt. wt. of di-n-butylamine [as a reaction stopping agent], and agitated at 35°C for 2 hrs. A trans-parent PU resin soln. with viscosity of 14,000 cps. is obtd. (9ppW156ETDwgNo0/0).

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/00863

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. [7]: C08G 18/61, 18/48, A61L 27/00, 29/00, 31/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C08G 18/61, 18/48

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
AU: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WPAT & JAPIO

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	AU 41924/97 (CARDIAC CRC NOMINEES PTY LTD) 17 April 1998 Page 6 line 23 - page 13 line 18, Examples 1-20 and claims 1-48	1-76
X	US 5911737A (LEE et al.) 15 June 1999 Column 3 lines 10-20, column 3 line 51 - column 4 line 13,	1-76
X	US 5139832A (HAYASHI et al.) 18 August 1992 Column 2 line 25 - column 3 line 27, Examples	1-76

[X] Further documents are listed in the continuation of Box C [X] See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
2 August 2000	- 4 AUG 2000
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer **ALBERT S. J. YONG** Telephone No : (02) 6283 2160

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/00863

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5049591A (HAYASHI et al.) 17 September 1991 Column 2 lines 22-33, Table 1	1-76
X	US 5430121A (PUDLEINER et al.) 4 July 1995 Column 4 lines 3-53, column 8 lines 30-36	1-76
X	US 5393858A (MEIJS et al.) 28 February 1995 Column 2 line 26 - column 3 line 41, Example 2	1-76
X	US 4786657A (HAMMAR et al.) 22 November 1988 Examples 12, 19, 20	1-76
X	Derwent Accession No. 92-344628/42, Class P34, JP 4-248826A (TOYOBO KK) 4 September 1992 See Abstract	1-76
X	Derwent Accession No. 95-325584/42, Class A25, JP 7-224138A (SANYO CHEM) 22 August 1995 See Abstract	1-76
X	Derwent Accession No. 88-246748/35, Class A25, JP 63-179916A (DAINIPPON INK CHEM) 23 July 1988 See Abstract	1-76

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU00/00863

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
AU	41924/97	WO	98/13405	EP	938512		
US	5911737	AU	63432/98	WO	98/37816		
US	5139832	CA	1321461	EP	363919	JP	2106324
US	5049591	CA	1319238	EP	361418	JP	2092912
US	5430121	CA	2111925	DE	4243799	EP	
US	5393858	AU	80065/91	EP	536223	WO	92/00338
US	4786657	AU	17306/88	CA	1333948	EP	298611
		JP	1033114				
JP	4-248826	NONE					
JP	7-224138	NONE					
JP	63-179916	NONE					

END OF ANNEX